

CASE STUDY

EPM's Ituango Hydroelectric Project



Power Move: Delivering success to Colombia's Ituango hydroelectric project through expert logistics and heavy lift solutions

Challenge Summary

EPM's Ituango Hydroelectric Project faced significant challenges, including delays due to heavy rains and logistical complexities in transporting critical underwater equipment. PSA BDP's tailor-made solution involved using Antonov AN-124 aircrafts to transport the equipment, ensuring timely and efficient completion, ultimately contributing to the project's success.

Services & Technologies Used

- Projects & Heavy Lift Logistics
- Route survey & feasibility studies
- Chartering management
- Stowage and lifting plan design and technical documentation
- Provision of certified surveyor
- Document management
- Overall project management

The Challenge

For the critical underwater works at Hidroituango, EPM initiated a competitive bidding process to transport essential equipment from Zagreb Airport in Croatia to José María Córdova Airport in Medellín.

EPM and PSA BDP have a history of successful collaboration on various projects over the past three years, including arranging full air and ocean charters, as well as a solar panel project in 2022. PSA BDP studied and designed the logistics strategy for the transport of two of the four mechanical bulkheads that were installed by underwater works at a depth of 60 meters at the Hidroituango power plant.

EPM selected PSA BDP for this critical project based on their reliable and competitive technical proposal, which highlighted the careful planning, proven experience, operational alternatives, and risk analysis.

Construction of the 2,400-megawatt Hidroituango dam began in 2012 in Antioquia province. However, in April 2018, the project faced heavy rains that caused large landslides, delaying its completion. In October 2023, EPM awarded a contract to a Colombian-Chinese consortium to finish civil engineering works at the Hidroituango dam.

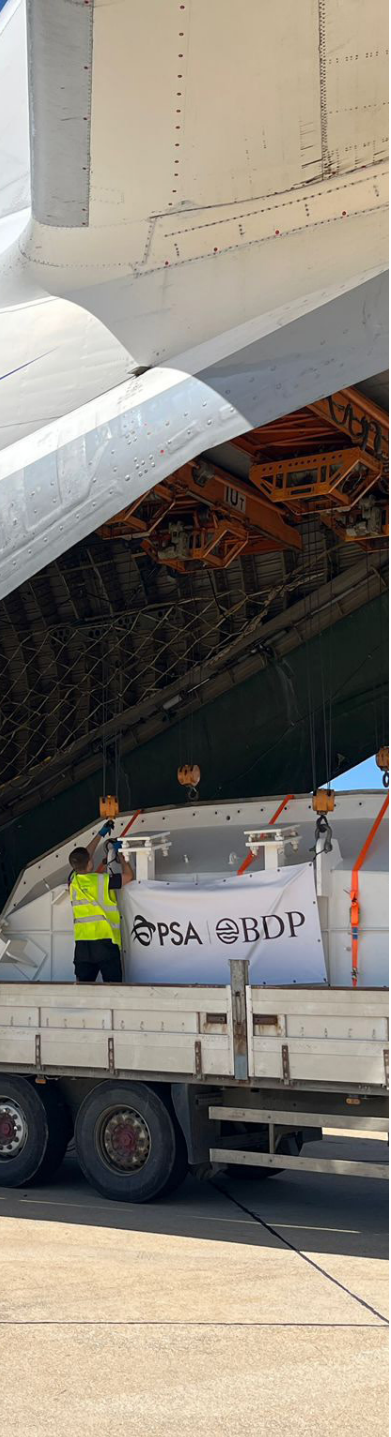
The Solution

The PSA BDP project team offered a combination of aircrafts that would adapt to the cargo needs and project timelines. The specialized solution involved two charters using the Antonov AN 124 aircraft for the transport of two underwater bulkheads weighing approximately 85 tons each per flight.

“Upon examining the details and all of the conditions of PSA BDP's proposal - including timelines, reservation opportunities, analysis of all the terms of the contract, and overall support from PSA BDP - it became clear that the proposal aligned very well with EPM's needs.”

-Natalia Rodríguez Mejía,
Head of Foreign Trade, EPM





PSA BDP's strategy for the air transport of oversized and overweight equipment included specific timeline requirements to meet the project schedule. The planning process encountered challenges, such as the limited availability of Antonov aircrafts. Many Antonov AN-124 planes, the world's largest aircraft, were unavailable for long periods. PSA BDP worked closely with the customer to manage risks and make strategic decisions to secure the aircraft on the necessary dates.

The project planning took approximately six months after the official award. This period involved detailed analysis of cargo specifics, which often varied from initial designs, and close collaboration with the equipment supplier, aircraft operator, and local agents handling customs and transportation. This synergy was crucial for meeting the schedule, ensuring timely flight departures and arrivals, and ultimately, the successful installation of the equipment at the hydroelectric plant.

The Result

PSA BDP provided robust support to execute the operation, even amidst socio-political crises. The team effectively navigated challenges to secure and position the aircraft within the project's specified timeframe. Additionally, PSA BDP engaged in meticulous planning with EPM's logistics team to ensure strict adherence to the execution schedule. This effort ensured the project's successful completion within the established deadlines.

PSA BDP's support, planning, strategic analysis, solution proposals, 24/7 availability, and experience in handling high-impact projects were instrumental in the project's success, which in turn, will have major national impact. Hidroituango has an installed capacity of 2,400 megawatts with its 8 generation turbines operating, a sufficient amount of energy to supply 17% of the energy that Colombia demands.

The transportation of these two bulkheads represented a critical milestone for the commissioning of turbines 3 and 4, and therefore the initiation of the country's most important hydroelectric project. PSA BDP contributed to this through their professional, efficient, and resilient work in overcoming the obstacles that arose over months to meet the schedule.

About EPM

Empresas Públicas de Medellín E.S.P. (EPM) is a public utilities company based in Medellín, Colombia. It provides a range of services, including electricity, gas, water, sanitation, and telecommunications. EPM is developing the Ituango Hydroelectric Project, a significant infrastructure project aimed at expanding electricity capacity in Colombia.

"PSA BDP is a great company, where the commitment of all participants stands out. They not only present a proposal, but also accompany the entire process to achieve the expected results. They keep us informed, thereby guaranteeing timeliness in the actions to follow."

-Natalia Rodríguez Mejía,
Head of Foreign Trade, EPM

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